



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,223	02/25/1999	LESLIE DEREK HUMPHREY	476-1733	1908

7590 05/12/2003

BARNES & THORNBURG
SWEENEY & OHLSON
P O BOX 2786
CHICAGO, IL 60690-2786

EXAMINER

GEORGE, KEITH M

ART UNIT	PAPER NUMBER
2663	14

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/257,223	HUMPHREY, LESLIE DEREK
	Examiner Keith M. George	Art Unit 2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 March 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,4-7,12 and 13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,2,4-7,12 and 13 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 17 October 2002 is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis in view of Czerwic and Lamport. Achilleoudis teaches a digital communication service as shown in figure 2 and also teaches the use of mini-cells based on Asynchronous Transfer Mode (ATM) (column 4, lines 35-39). These mini-cells are allocated for housekeeping, ranging, MAC-layer and payload (control and supervision) (column 4, lines 43-46). Achilleoudis also teaches that the amount of mini-cells allocated for housekeeping, ranging, MAC-layer and payload is adapted to the actual need, and can even be zero for some cell types (column 4, lines 43-47). Since the mini-cells can be used for payload, any type of data traffic can be sent over them, including packet voice traffic. Achilleoudis also teaches that the mini-cells are frame and byte oriented as shown in figure 3. Achilleoudis teaches all of the above with the possible exception of scrambling the data over the line and synchronization that occurs during a period of null data transmission. Czerwic teaches an ATM system that includes a scrambler before a Reed Solomon encoder and a descrambler after the Reed Solomon decoder (column 18, lines 4-6). Lamport teaches packet flow control for a local area network where if there is no data which needs to be sent between two hosts, then synchronization bytes are sent,

and the synchronization bytes are simply null data (column 9, lines 65-68). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the scrambler/descrambler of Czerwiec to the method of Achilleoudis in order to randomize the data (Czerwiec, column 18, lines 4-6). It would have also been obvious to a person of ordinary skill in the art to use the packet flow control method of Lamport to send synchronization bytes as null data since they can instruct the receiver that no data is being sent (Lamport, column 10, lines 31-34).

3. Claims 2, 4-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec and Lamport as applied to claim 1 above, and further in view of Deng.

4. Referring to claim 2, 6 and 13, Achilleoudis, Czerwiec and Lamport teach a digital communication system, the use of mini-cells for control and supervision, scrambling the data over the line and synchronization that occurs during a period of null data transmission as shown in claim 1 above. Achilleoudis, Czerwiec and Lamport teach all of the above with the possible exception of the use of modems to connect the two systems, a multiplexer or packet transaction means. Deng teaches a digital communication system comprising an ADSL Modem, Data Bus/Multiplexer and Switching Port Controllers (packet transaction means) in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize the mini-cells as taught by Achilleoudis, Czerwiec and Lamport over the network taught by Deng. One of ordinary skill in the art would have been motivated to do this in order to facilitate an easy implementation of multiple services over a single communication network (Achilleoudis, column 4, line 48).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec, Lamport and Deng as applied to claim 2 above, and further in view of Deng. As applied to claim 2, Achilleoudis, Czerwiec, Lamport and Deng do not teach a connection to an ATM network. Deng teaches a WAN protocol converter in figure 5 that can convert the protocol of data packets received from the wide area network from WAN protocols, such as frame relay or ATM protocol (column 7, lines 57-60). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the network of Achilleoudis, Czerwiec, Lamport and Deng to an ATM network to provide WAN connectivity to the devices on the network.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achilleoudis, Czerwiec, Lamport and Deng as applied to claim 4 above, and further in view of Deng. As applied to claim 4, Achilleoudis, Czerwiec, Lamport and Deng do not teach a twisted conductor pair to connect the two devices. Deng teaches a twisted conductor pair to connect the devices as shown in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the two devices in the communication network of Achilleoudis, Czerwiec, Lamport and Deng with a twisted conductor pair as taught by Deng since an ADSL modem transmits and receives digital data packets on twisted pair (Deng, column 5, lines 2-3).

Response to Arguments

7. Applicant's arguments filed 12 March 2003 have been fully considered but they are not persuasive. On page 2 of the Response to Office Action Mailed December 18, 2002, applicant

argues that Achilleoudis does not contain a separate channel for sending engineering operations information and that the Engineering Order information can have priority over payload data in the EOC. Regardless of whether or not these limitations are taught by Achilleoudis, they do not appear as limitations in claims 1, 7 or 12.

8. On page 3 of the Response, applicant argues that Czerwic and Lamport do not show an EOC and therefore cannot show the limitations of the claim. While it may be possible that Czerwic and Lamport do not show an EOC, Czerwic clearly teaches scrambling data that is sent over an ADSL line (column 17, line 66 – column 18, line 6) and Lamport clearly teaches that it is common in packet flow control to send synchronization bytes in the form of null data when there is no data which needs to be sent (column 9, lines 64-68 and column 10, lines 31-34). It is the combination of Czerwic and Lamport with Achilleoudis that teach the limitations recited in claims 1, 7 and 12. It would have been obvious to one of ordinary skill in the art to use the scrambling technique of Czerwic to provide protection against potential errors in the transmission channel. It would have been obvious to one of ordinary skill in the art to use the synchronization technique of Lamport since it is a common method used in packet flow control.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

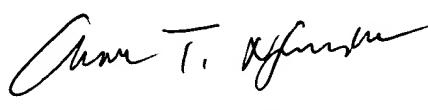
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, every other F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.



Keith M. George
May 7, 2003



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600